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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/538,350

06/10/2005

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2380-1295

1940

23117

7590

09/02/2009

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EXAMINER

KHAN, MEHMOOD B

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

09/02/2009

PAPER

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### **DETAILED ACTION**

- *The method claims below are analyzed such that a first and second communication standards inherently require the use of an apparatus, device or system. Furthermore the claims are also drawn towards **transmission gaps**, i.e. there is a transmitter.*

### ***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

The objection to the adding of the new matter to the specification has been removed. The specification can be amended with respect to the correction as stated, by the applicant, in the remarks. First paragraph on page 13 can be inserted.

As for the USC 112 rejection of claims 38 and 39, The Examiner is pointing to the specification being void of what is considered by the Applicant as computer readable storage medium. Further clarification should be provided.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005) Section IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive

material” consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of “data structure” is “a physical or logical relationship among data elements, designed to support specific data manipulation functions.” The new IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5<sup>th</sup> ed. 1993).) “Nonfunctional descriptive material” includes but is not limited to music, literary works and compilation or mere arrangement of data. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F. 3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F. 3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory to a data structure per se held nonstatutory.) In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and rest of the computer which permit the computer program’s functionality to be realized, and is thus statutory. See *Lowry*, 32 F. 3d at 1583-84, 32 USPQ2d at 1035.

Claims 38 and 39 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 38 defines a computer program embodying functional descriptive material. However, the original specification does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., “When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the

medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” – Guidelines Annex IV). That is, the scope of the presently claimed computer program can range from paper on which the program is written, to a program simply contemplated or memorized by a person. The examiner suggests amending the claim to embody the program on “computer-readable medium” or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure. As currently, the original specification does not shed light on the scope of the medium as claimed.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 38 and 39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The original specification does not disclose the claimed “computer readable storage medium or in a computer readable storage device” as stated in the above claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ketseoglou in view of Faerber (US 2003/0031143).**

Claim 1, Ketseoglou discloses a method for operating a first communications environment for which first communications resources (TG) are provided for communications according to a first communications standard type **(Col 3: 23-28, where Ketseoglou discloses a first protocol, i.e. a first communications environment using a first protocol)**, Ketseoglou discloses using the first communication resources for communications according to the first communications standard type, using the first communications resources for communications according to a second communications standard type **(Col 3: 35-37, where Ketseoglou discloses a first and second protocol, It is well known ton one of ordinary skill in the art that cellular communications are enabled over resources, i.e. spectrum / time frames with time slots)**, Ketseoglou discloses controlling the use of the first communications resources as being used for communications according to the first communications standard type in dependence of communications to be performed according to the second communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol)**, communicating according to the first communications standard type by using a first frame structure including at least one transmission gap (TG) **(It is well known to one of ordinary skill in the art that a TDMA protocol and a spread spectrum protocol use different frame structures and guard time is used in a TDMA protocol)**, Ketseoglou discloses controlling the use of the first communication

resources by controlling at least one of a number and duration of the at least one transmission gap (TG) **(Col 24: 41-46, where Ketseoglou discloses inserting time gaps between slots of both protocols).**

Ketseoglou does not disclose using the at least one transmission gap (TG) for communications according to the second communications standard type for transmitting data of the second communications in the at least one transmission gap.

In an analogous art, Faerber discloses using the at least one transmission gap (TG) for communications according to the second communications standard type for transmitting data of the second communications in the at least one transmission gap **(0027-0029, where Faerber insertion of transmission gaps for RSSI determination and evaluation of received control channels)**. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ketseoglou to insert gaps in the transmission as taught by Faerber so as to increase capacity and improve quality **(0029)**.

Claim 2, Ketseoglou discloses controlling the use of the first communications resources (TG) for communications according to the first communications standard type in dependence of communications to be performed according to the first communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol)**.

Claim 3, Ketseoglou discloses using second communications resources provided for communications according to the second communications standard type for communications according to the first communications standard type and controlling the

use of the second communications resources for communications according to the second communications standard type in dependence of communications to be performed according to the first communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots assigned to a protocol to be used by a different protocol depending on the number of users).**

Claim 4, Ketseoglou discloses communicating according to the second communications standard type by using a second frame structure **(Fig. 15: 926a and 926b, where Ketseoglou discloses different frames from different protocols creating a composite frame)**, Ketseoglou discloses controlling the use of the second communications resource by controlling at least one of a number and a duration of at least a part of the second frame structure being used for communications according to the second communications standard type **(Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol).**

Claim 5, Ketseoglou discloses controlling the use of the second communications resources for communications according to the second communications standard type in dependence of communications to be performed according to the second communications standard type **(Col 22: 33-43, Fig. 15: 926a and 926b, where Ketseoglou discloses time slots with respect to both communication protocols).**

Claim 6, Ketseoglou discloses wherein the first communications resources include a first frequency range **(Col 28: 19-22, Fig. 21: 985, where Ketseoglou discloses Group A frequencies).**



Claim 7, Ketseoglou discloses wherein the first frequency range and the second frequency range overlap at least partially (**Col 28: 23-28, where Ketseoglou discloses overlap**).

Claim 8, Ketseoglou discloses controlling the use of the first communications resources for a geographical area for which both communications according to the first communications standard type and communications according to the second communications standard type are provided (**Col 3: 23-29, where Ketseoglou discloses operation in the same or overlapping geographic region**).

Claim 9, Ketseoglou discloses available communications resources for communications according to the second communications standard type (**Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol**).

Claim 10, Ketseoglou discloses available communications resources for communications according to the first communications standard type (**Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol**).

Claim 11, Ketseoglou discloses providing the first communications resources as resources comprised by the first communications environment, which provides for

communications according to the first communications standard type (**Fig. 15: 926a and 926b, where Ketseoglou discloses time slots used for both types of protocols**).

Claim 12, Ketseoglou discloses providing the first communications resources as resources comprised by the first communications environment, which provides for communications according to the first communications standard type (**Fig. 15: 926a and 926b, where Ketseoglou discloses time slots used for both types of protocols**), Ketseoglou discloses providing the second communications resources as resources comprised by a second communications environment, which provides for communications according to the second communications standard type (**Col 3: 23-28, where Ketseoglou discloses a second protocol, i.e. a second communications environment using a second protocol**).

Claim 13, Ketseoglou discloses communicating information indicating available communications resources for communications according to the second communications standard type to the first communications resources so as to control the use of the first communications resources (**Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol**).

Claim 14, Ketseoglou discloses communicating information indicating available communications resources for communications according to the first communications

standard type to the second communications resources so as to control the use of the second communications resources **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol).**

Claim 15, Ketseoglou discloses using the first communications resources for only communications according to the first communications standard type, or only communications according to the second communications standard type, or communications according to the first communications standard type and communications according to the second communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol).**

Claim 16, Ketseoglou discloses using the second communications resources for only communications according to the first communications standard type, or only communications according to the second communications standard type, or communications according to the first communications standard type and communications according to the second communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol).**

Claim 17, Ketseoglou discloses controlling the use of the first communications resources such that communications according to the first communications standard type are prioritized in relation to communications according to the second communications standard type **(Col 32: 30-34, where Ketseoglou discloses prioritization)**.

Claim 18, Ketseoglou discloses controlling the use of the second communications resources such that communications according to the second communications standard type are prioritized in relation to communications according to the first communications standard type **(Col 32: 30-34, where Ketseoglou discloses prioritization)**.

Claim 19, Ketseoglou discloses a communications environment, being adapted to utilize first communications resources (TG) for communications according to a first communications standard type for communications according to a second communications standard type **(Col 3: 35-37, where Ketseoglou discloses a first and second protocol, It is well known ton one of ordinary skill in the art that cellular communications are enabled over resources, i.e. spectrum / time frames with time slots)**, Ketseoglou discloses to control the use of the first communications resources (TG) for communications according to the first communications standard type in dependence of communications to be performed according to the second communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol)**, Ketseoglou discloses wherein the first communications resources comprise a first frame structure including at

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least one transmission gap (TG) **(It is well known to one of ordinary skill in the art that a TDMA protocol and a spread spectrum protocol use different frame structures and guard time is used in a TDMA and TDD protocol)**, Ketseoglou discloses wherein the communications environment is adapted to control the use of the first communications resources by controlling at least one of a number and duration of the at least one transmission gap (TG) **(Col 24: 41-46, where Ketseoglou discloses inserting time gaps between slots of both protocols)**.

The amendment to the limitations as analyzed with respect to the limitations as discussed in claim 1.

Claim 20, as analyzed with respect to the limitations as discussed in claim 2.

Claim 21, as analyzed with respect to the limitations as discussed in claim 3.

Claim 22, as analyzed with respect to the limitations as discussed in claim 4.

Claim 23, as analyzed with respect to the limitations as discussed in claim 5.

Claim 24, as analyzed with respect to the limitations as discussed in claim 6.

Claim 25, as analyzed with respect to the limitations as discussed in claim 7.

Claim 26, as analyzed with respect to the limitations as discussed in claim 8.

Claim 27, as analyzed with respect to the limitations as discussed in claim 9.

Claim 28, as analyzed with respect to the limitations as discussed in claim 10.

Claim 29, as analyzed with respect to the limitations as discussed in claim 11.

Claim 30, as analyzed with respect to the limitations as discussed in claim 12.

Claim 31, as analyzed with respect to the limitations as discussed in claim 13.

Claim 32, as analyzed with respect to the limitations as discussed in claim 14.

Claim 33, as analyzed with respect to the limitations as discussed in claim 15.

Claim 34, as analyzed with respect to the limitations as discussed in claim 16.

Claim 35, as analyzed with respect to the limitations as discussed in claim 17.

Claim 36, as analyzed with respect to the limitations as discussed in claim 18.

Claim 37, Ketseoglou discloses a radio base station for a communications environment being adapted to be operated according to the steps of claim 1 (**Fig. 13, where Ketseoglou discloses an integrated base station**).

Claim 38, Ketseoglou discloses a computer program product, comprising program code portions for carrying out the steps according to claim 1 (**Col 21: 14-22, where Ketseoglou discloses processors, it is well known to one of ordinary skill in the art that processors perform instructions based on computer program code**).

Claim 39, Ketseoglou discloses being stored on a computer readable storage medium or in a computer readable storage device (**Col 21: 14-22, where Ketseoglou discloses processors, Col 25: 22-29, where Ketseoglou discloses programming of time slots, it is well known to one of ordinary skill in the art that a processor is a computer readable storage device**).

Claim 40, Ketseoglou discloses wherein the second communications resources include a second frequency range (**Col 28: 23-28, Fig. 21: 981**).

Claim 41, as analyzed with respect to the limitations as discussed in claim 8.

Claim 42, as analyzed with respect to the limitations as discussed in claim 10.

Claim 43, as analyzed with respect to the limitations as discussed in claim 10.

Claim 44, Ketseoglou discloses providing the first communications resources and second communications resources as resources comprised by the first communications environment, which provides for both communications according to the first

communications standard type and communications according to the second communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol).**

Claim 45, as analyzed with respect to the limitations as discussed in claim 40.

Claim 46, as analyzed with respect to the limitations as discussed in claim 10.

Claim 47, as analyzed with respect to the limitations as discussed in claim 10.

Claim 48, as analyzed with respect to the limitations as discussed in claim 44.

Claim 49, as analyzed with respect to the limitations as discussed in claim 8.

Claim 50, Ketseoglou discloses wherein the second communications resources include a second frequency range **(Col 28: 19-22, where Ketseoglou discloses different frequency groups).**

Claims 51 and 55, as analyzed with respect to the limitations as discussed in claim 1.



Claims 52 and 56, wherein the first frame structure is according to wideband code division multiple access (WCDMA) and the second frame structure is according to time division multiple access (TDMA) **(Abstract)**.

Claims 53 and 57, as analyzed with respect to the limitations as discussed in claim 52 and 56, respectively.

Claims 54 and 58, Ketseoglou discloses providing an offset for aligning a first one of the frames of the second frame structure with the at least one of the transmission gaps of the first frame structure **(Col 24: 6-33, where Ketseoglou discloses time gaps from a time frame #1 are inserted between time frame #1 and time frame #2)**.

Claim 59, as analyzed with respect to the limitations as discussed in claim 1.

Claim 60, as analyzed with respect to the limitations as discussed in claim 58.

Claim 61, Ketseoglou discloses adaptively controlling the sharing based on a number of allocated and/or requested communications resources for the first communications and the second communications **(Col 23:35-58, where Ketseoglou discloses a demand migration table which shows sharing time slots between protocols)**.

Claim 62, as analyzed with respect to the limitations as discussed in claim 1.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEHMOOD B. KHAN whose telephone number is (571)272-9277. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business

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